

REMARKS

Status of Claims:

Claims 1-26 and 40-42 are pending in the application. Each of the pending claims defines an invention that is novel and unobvious over the cited art. Favorable consideration of this case is respectfully requested.

Telephonic interview:

The Applicants thank Examiner Mark Halpern for his courtesy in conducting a telephonic interview.

Applicant's representative agreed, without admission, to cancel the recitations objected to under 35 U.S.C. § 132.

The Examiner pointed out that "comprising" language read on the fatty acids of the cited art, but that a recitation of "consisting of saturated fatty acid" distinguishes over the cited art.

The present amendment cancels all "comprising" language and recites "wherein said 2-oxetanone contains a plurality of groups from a plurality fatty acids, wherein each fatty acid group is a saturated fatty acid consisting of a main chain having 6-22 carbons linked by saturated bonds."

Claim Objections:

The Amendment filed November 19, 2002 was objected to under 35 U.S.C. § 132, as allegedly introducing new matter. The applicants specifically do not admit that the recitations, objected to, comprise new matter. The objected to language recites that the fatty acids comprising the oxetanones of the invention are fully saturated. The Original specification recited: "the main aspect of the invention is to provide a method...containing a step of adding a 2-oxetanone based size to the pulp slurry, the size being manufactured from...fatty acids having a main chain comprising 6-22 carbons

linked to each other by saturated bonds.” (Page 4, lines 11-19). However, to advance the prosecution of this case, the recitation “essentially free of unsaturated.” is hereby cancelled from claims 1 and 13 and the recitation “free of unsaturated” is cancelled from claim 40, without prejudice to, or disclaimer of, the subject matter contained therein. Claims 1, 13, and 40 are hereby amended to recite: “contains a plurality of units derived from a fatty acid, wherein each said fatty acid unit consists of a main chain having 6-22 carbons linked by saturated bonds.” This recitation is provided solely to clarify that the fatty acid portion of the inventive 2-oxetanones consists of fully saturated carbons. Support for this recitation was provided by the original disclosure at page 4, lines 16-18 and 27-28, and page 5, lines 15-17.

Rejection Under 35 U.S.C. § 102(b):

Claims 1-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by Brungardt (5,766,417).

Rejection under 35 U.S.C. § 102 requires the cited art disclose each and every recitation of the claimed invention (MPEP § 706.02). In determining anticipation, no claim recitation may be ignored. See *Pac-Tex, Inc. v. Amerace Corp.*, 14 USPQ2d 1871 (Fed. Cir. 1990). Anticipation requires the disclosure, in a cited reference, of each and every recitation as set forth in the claims. See *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985), *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 1 USPQ2d 1081 (Fed. Cir. 1986), and *Akzo N.V. v. U.S. International Trade Commissioner*, 1 USPQ2d 1241 (Fed. Cir. 1986). There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. § 102. See *Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (CAFC 1991) and *Studiengesellschaft Kohle GmbH v. Dart Industries*, 220 USPQ 841 (CAFC 1984). The evidentiary record fails to teach each recitation of the present invention in view of the patentable distinction of the 2-oxetanones at issue.

Claims 1, 13, and 40 have been amended to recite that the fatty acid portion of the present inventive oxetanones contains a plurality of groups from a plurality fatty acids, wherein each fatty acid group is a saturated fatty acid consisting of a main chain having 6-22 carbons linked by saturated bonds. This recitation clarifies a distinction between Brungardt and the present invention.

The present invention relates to papermaking sizes based on 2-oxetanones. The art is familiar with 2-oxetanones, *per se*. However, the present invention requires the fatty acids comprising said oxetanones to be fully saturated. (See page 4, lines 11-19; 27-28, page 5, lines 15-17; and original claims 1, 13, and 40). In contradistinction, Brungardt requires at least 25% of the fatty acids be unsaturated. (Column 4, lines 29-30). An oxetanone, the fatty acid portion of which, is required to contain at least 25% unsaturated fatty acid units, does not anticipate an oxetanone, the fatty acid portion of which, is required to consist only of completely saturated fatty acid units.

The Examiner refers to Brungardt (col. 4, lines 57-67) as disclosing saturated fatty acids. The Applicants do not allege that Brungardt does not disclose saturated fatty acids. However, Brungardt requires a mixture of at least 25% unsaturated fatty acids, but notes that the mixture "may further comprise saturated monocarboxylic fatty acids." (Column 4, lines 34-35). The passage cited by the Examiner (col. 4, lines 57-67), refers to preferred saturated fatty acids to be included in the mixture containing primarily unsaturated fatty acids.

The present invention distinguishes over Brungardt because the fatty acid portion of the inventive oxetanones consists of saturated fatty acid groups. Brungardt, to the contrary, discloses oxetanones, the fatty acid portion of which, comprises a mixture of unsaturated and saturated fatty acids. Brungardt discloses a 2-oxetanone having R and R" groups derived from fatty acids. The Examiner asserts that Brungardt teaches that the R and R" groups may be saturated or unsaturated. (Citing col. 4, lines 25-30). However, in the quoted passage, Brungardt recites "wherein at least 25% of the R and R" groups in the mixture of compounds is unsaturated." (Column 4, lines 29-30). The Examiner refers

to paper made in Examples 1-3 (cols. 9-10). Example 1 recites 73% oleic acid (unsaturated), 8% linoleic acid (polyunsaturated), 6% palmitoleic acid (unsaturated), 3% myristoleic acid (unsaturated), 1% linolenic acid (polyunsaturated), and 9% unspecified saturated fatty acids. Examples 2 and 3 recite the same fatty acid composition as disclosed in Example 1. The fatty acid portion of the oxetanones of present invention consists of saturated fatty acids; whereas, the fatty acid portion of Brungardt's oxetanones comprises saturated fatty acids because Brungardt requires at least 25% unsaturated fatty acids.

The law is well settled that claiming a more specific range within a more generic range and/or claiming species from a broader group of possible compounds avoids a lack of novelty rejection. The test for anticipation is whether the claims read on the prior art disclosure, not on what the references broadly teach. For example, see *Akzo N.V. v. U.S. International Trade Commissioner*, 1 USPQ2d 1241 (Fed. Cir. 1986); *In re Kollman*, 201 USPQ 193 (CCPA-1979); and *Rem-Cru Titanium v. Watson*, 112 USPQ 88 (D.D.C.-1956). The present invention avoids anticipation because it claims a species (solely saturated fatty acids) from a broader generic group (containing saturated and unsaturated fatty acids) taught by Brungardt.

The present invention provides a distinct advantage over the cited art. Double bonds (unsaturation) represent potential oxidation sites. Oxidation of oxetanones used in a size would result in the loss of sizing efficiency. Furthermore, such oxidation would result in the production of undesirable odor compounds. The present invention avoids these disadvantages by eliminating the potential oxidation sites.

Rejection Under 35 U.S.C. § 103(a):

Claims 25-26 were rejected under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a), as obvious in view of, Brungardt (5,766,417).

Claims 25-26 are product-by-process claims.

Claims 40-42 were rejected under 35 U.S.C. § 102(e) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a), as obvious in view of, Brungardt (5,766,417).

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*. All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*. (MPEP § 2143.03). When evaluating the scope of a claim, every limitation in the claim must be considered. See e.g. *In re Ochiai*. (MPEP § 2144.08). The evidentiary record fails to teach each limitation of the present invention. Specifically, as discussed above, Brungardt fails to teach a 2-oxetanone formed from a mixture of fatty acids consisting of saturated fatty acids. Because Brungardt requires at least 25% unsaturated fatty acid units, the cited art neither anticipates, nor renders obvious, an oxetanone, the fatty acid units of which, consist of fully saturated carbon centers. Because Brungardt is silent as to fully saturated fatty acid units in an oxetanone paper size, Brungardt cannot teach any use of such a size, nor can Brungardt teach a paper, or other product, fabricated from such a size.

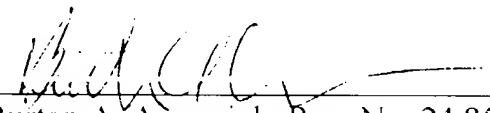
Conclusion:

It is respectfully requested that the foregoing amendment be entered, that the application as so amended receive an examination on the merits, and that the claims as now presented receive an early allowance.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Commissioner is hereby authorized to charge any fees or credit any overpayment associated with this communication, including any extension fees or fees for the net addition of claims, to Deposit Account No. 22-0185.

Respectfully submitted,



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